SECTION VIII

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## 510(k) SUMMARY OF SAFETY AND EFFECTIVENESS

DEC 2 0 2002

**Device Description:** 

Device Trade Name:

DRX5000

Common Name:

**Traction Equipment** 

Classification Name:

Power Traction Equipment

Class and Reference

Class II (21 CFR Section 890.5900) 89 ITH

Product Code: Panel Code:

**87 ORS** 

**Predicate Devices:** 

K001712 3-D Active Trac - Saunders Group K844385 Tru-Trac 401 Traction - Henley International

### Proposed Intended Use

The DRX5000 provides a program of treatments for relief from pain for those patients suffering with low back pain and neck pain. Each treatment consists of a physician prescribed treatment period on the DRX5000 and is designed to provide static, intermittent, and cycling distraction forces to relieve pressures on structures that may be causing low back or neck pain. Conditions that may be treated include neck pain and back pain associated with herniated discs, protruding discs, degenerative disc disease, posterior facet syndrome, and sciatica. It achieves these effects through decompression of intervertebral discs, that is, unloading due to distraction and positioning.

### **Technological and Clinical Application Characteristics**

The DRX5000 incorporates various principles and working characteristics of the predicate devices, the 3-D Active Trac (K001712) and the Tru-Trac 401 Traction Device (K844385). The incorporating of the traction device and a flat surface type powered bed, whilst giving a new overall appearance to the apparatus, has not impacted on or changed the safety of effectiveness of the devices. The Tru-Trac 401 has been in use in this country for more than ten years and we have no evidence of a MDR report being filed by the manufacturer nor have we been made aware of any events or conditions effecting the operation of this equipment. Clinical trials carried out by VAX-D (K951622) endorse the

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# Axiom USA, Inc. DRX 5000<sup>TM</sup> - 510(k) Notification Submission

principle of decompression and similar studies using similar technology have reported the same results. (Please see the Appendices).

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### **Summary of Key Descriptive Elements:**

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The key elements to the DRX5000 are as follows:

- 1. The bed is a stand on/stand off tilt type bed that allows the fully clothed patient to step onto a footrest while it is in near vertical position. The bed and patient can then be slowly lowered to the horizontal treatment position using a remote controller hand held by the practitioner.
- 2. The bed is split into two cushions, each slide able in the horizontal plane only on low friction runners and each being able to be locked independently.
- 3. Distraction tensions are applied to the patient via a pelvic harness while the upper body of the patient is anchored to the locked upper cushion via a chest harness. The lower cushion, which is unlocked and on which the patient's lower trunk is rested, is able to slide easily thus reducing almost completely any frictional movement between patient and bed cushion when distraction tensions are applied, this concentrates virtually all the forces to the affected part of the lumbar spine.
- 4. The traction unit is mounted to the foot of the tower and the belt pulley system is attached to a vertical movable platform incorporated into the tower at the foot end of the bed. This enables the distraction tensions to be applied at differing angles to the patient (between 0 and 30 degrees).
- 5. The traction unit is programmed and controlled from a control panel fitted into the tower to give static or intermittent distraction.
- 6. The minimum and maximum distraction settings are 0-200 lbs.
- 7. Treatment parameters i.e. tensions and time are continuously monitored and shown by LCD readout at the time of treatment set up and during treatment.
- 8. At the conclusion of treatment time, tension always returns to zero.
- 9. A DVD player, which is incorporated in a separate section of the control panel, and headphones provide comfort and relaxation to the patient and provides and opportunity for patient education via clinical tapes.
- 10. There is instantaneous release of all tensions if the patient pushes the button on the hand held Patient Safety Switch, or the Stop Button, or Emergency Stop on the control panel has been pushed by the practitioner.
- 11. The DRX5000 will not operate if the Patient Safety Switch is not working properly or has not been tested prior to each treatment.
- 12. The treatment cannot be restarted when a patient activates the Patient Safety Switch or the Stop Button has been pushed during treatment unless all treatment parameters are manually re-entered into the controller.

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### **Summary of Safety Features**

The more important safety features of the DRX5000 include:

- 1. The activation of actuators for the bed are via a 24-volt electrical circuit.
- 2. The control circuitry for the distraction unit including the power supply to the Patient Safety Switch is a maximum 24 volts.
- 3. The patient is automatically reclined to the treatment position rather than climbing onto the treatment bed.
- 4. There is instantaneous release of all tensions when the button on the hand held Patient Safety Switch is depressed, the Stop Button is pressed on the control panel, or when electrical current is interrupted. The treatment program cannot be automatically restarted when any of those items in no. "10" have occurred without the full treatment parameters being manually re-entered into the control panel.
- 5. All treatment parameters must be manually entered each time a treatment occurs.
- 6. There is no vertical movement of the traction box only the pulley harnessing traverses vertically thereby stabilizing the traction unit into the foot of the bed..
- 7. There is a permanent, visible means of indication of the angle of distraction pull.
- 8. There is an audible warning signal when the unit is first turned on, when the treatment is completed, when the Patient Safety Switch is tested and when the Patient Safety Switch is activated during treatment.



DEC 2 0 2002

Food and Drug Administration 9200 Corporate Boulevard Rockville MD 20850

Mr. James J. Gibson, Jr. President & CEO Axiom USA, Inc. 3830 Gunn Hwy Tampa, Florida 33624

Re: K023160

Trade Name: DRX5000

Regulation Number: 21 CFR 890.5900

Regulation Name: Powered traction equipment

Regulatory Class: II Product Code: ITH

Dated: September 20, 2002 Received: September 23, 2002

Dear Mr. Gibson:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the <u>Federal Register</u>.

Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050.

This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (301) 594-4659. Additionally, for questions on the promotion and advertising of your device, please contact the Office of Compliance at (301) 594-4639. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21CFR Part 807.97). Other general information on your responsibilities under the Act may be obtained from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address http://www.fda.gov/cdrh/dsmamain.html.

Sincerely yours,

Celia M. Witten, Ph.D., M.D.

Director

Division of General, Restorative and Neurological Devices Office of Device Evaluation Center for Devices and Radiological Health

Miriam C. Provost

Enclosure

Axiom USA, Inc.
DRX5000<sup>TM</sup> - 510(k) Notification Submission

510(k) Number (if known): K023160

Device Name: DRX5000

**Indications For Use:** 

#### Intended Use

The DRX5000 provides a program of treatments for relief from pain for those patients suffering with low back pain and neck pain. Each treatment consists of a physician prescribed treatment period on the DRX5000 and is designed to provide static, intermittent, and cycling distraction forces to relieve pressures on structures that may be causing low back or neck pain. Conditions that may be treated include neck pain and back pain associated with herniated discs, protruding discs, degenerative disc disease, posterior facet syndrome, and sciatica. It achieves these effects through decompression of intervertebral discs, that is, unloading due to distraction and positioning.

(PLEASE DO NOT WRITE BELOW THIS LINE - CONTINUE ON ANOTHER PAGE IF NEEDED)

Concurrence of CDRH, Office of Device Evaluation (ODE)

Prescription Use (Per 21 CFR 801.109)

OR

Over-The-Counter Use

Miriam C. Provos Evision Sign-Off)

Division of General, Restorative

and Neurological Devices

K Number K023160